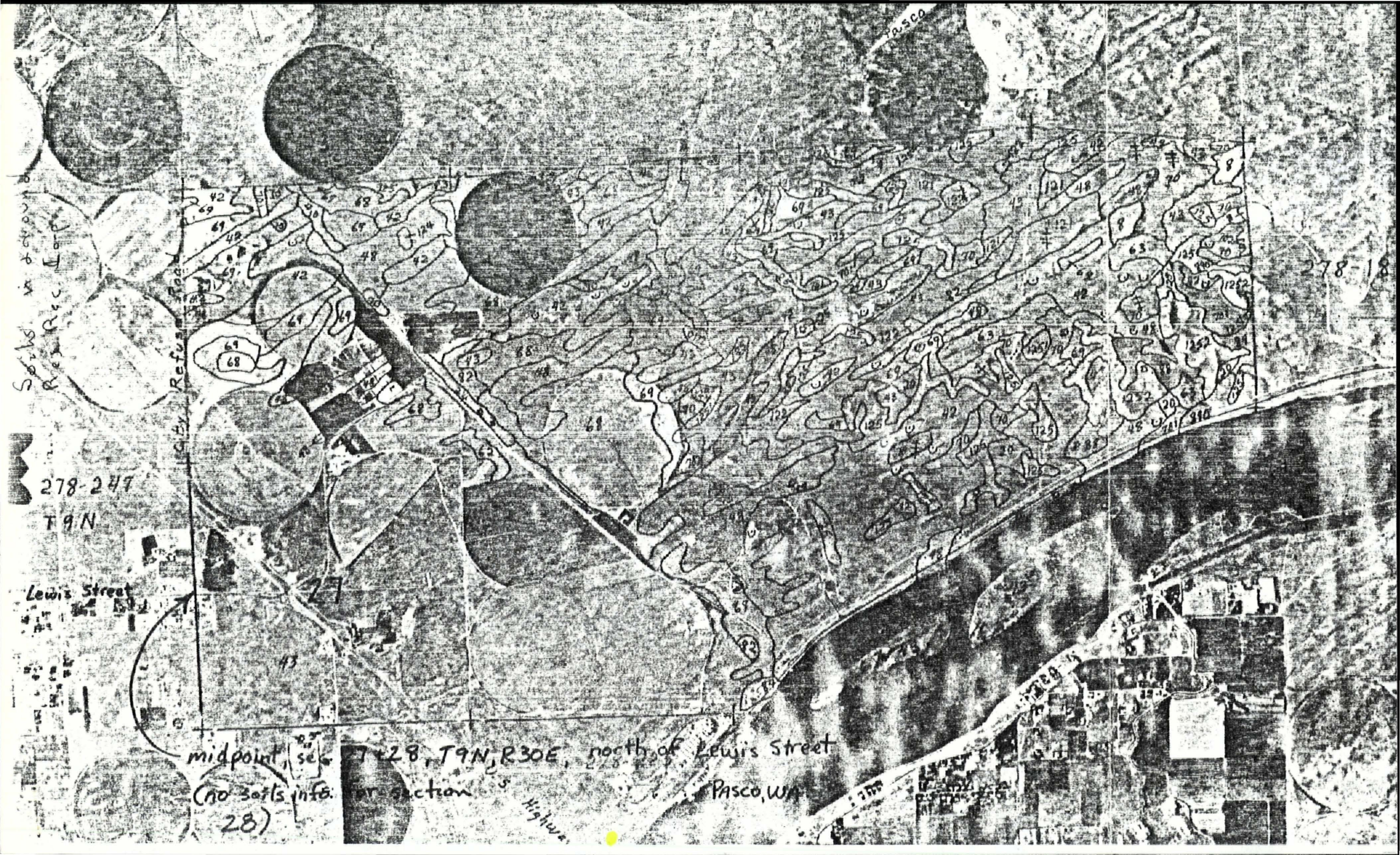
PA3SF 1.7

R-16



Soils in Pasco Res. Rec. Corp.
278-247
T9N
Lewis Street
City Refuse Road
Pasco
278-18
27
43
midpoint, sec. 27+28, T9N, R30E, north of Lewis Street
(no soils info. for section 28)
Pasco, WA
Highway

43 [redacted]QUINCY LOAMY FINE SAND, 0 TO 15 PERCENT SLOPES. $T1THIS VERY DEEP, SOMEWHAT EXCESSIVELY DRAINED SOIL IS ON TERRACES AND DUNES. IT FORMED IN SAND DERIVED FROM MIXED SOURCES. THE NATIVE VEGETATION IS MAINLY GRASSES AND SHRUBS. ELEVATION IS ~~3200~~ 350 TO ~~5200~~ 1000 FEET. THE AVERAGE ANNUAL PRECIPITATION IS ABOUT 7 INCHES, THE AVERAGE ANNUAL TEMPERATURE IS ABOUT 52 DEGREES F, AND THE AVERAGE FROST-FREE SEASON IS ABOUT ~~120~~ 190 DAYS.

TYPICALLY, THE SURFACE LAYER IS GRAYISH BROWN LOAMY FINE SAND 4 INCHES THICK. THE UPPER PART OF THE UNDERLYING MATERIAL IS LIGHT BROWNISH GRAY LOAMY FINE SAND 46 INCHES THICK. THE LOWER PART TO A DEPTH OF 60 INCHES OR MORE IS LIGHT BROWNISH GRAY FINE SAND.

$101PERMEABILITY OF THIS QUINCY SOIL IS RAPID. AVAILABLE WATER CAPACITY IS LOW. EFFECTIVE ROOTING DEPTH IS 60 INCHES OR MORE. RUNOFF IS SLOW, AND THE HAZARD OF WATER EROSION IS SLIGHT. THE HAZARD OF SOIL BLOWING IS HIGH.

$101INCLUDED IN THIS UNIT IS ABOUT 25 PERCENT HEZEL LOAMY FINE SAND, ROYAL LOAMY FINE SAND, TIMMERMAN LOAMY SAND, QUINCY FINE SAND, BURBANK LOAMY FINE SAND, AND QUINCY SOILS THAT HAVE SLOPES OF MORE THAN 15 PERCENT.

$101THIS UNIT IS USED FOR IRRIGATED CROPS, RANGELAND, IRRIGATED HAY AND PASTURE, AND HOMESITES.

$101IF THIS UNIT IS USED FOR IRRIGATED CROPS, THE MAIN LIMITATIONS ARE STEEPNESS OF SLOPE, THE LOW AVAILABLE WATER CAPACITY, AND THE HAZARD OF SOIL BLOWING. THE MAIN IRRIGATED CROPS ARE POTATOES, CORN, SMALL GRAIN, ALFALFA, AND GRASSES.

$101SPRINKLER, DRIP, OR TRICKLE IRRIGATION IS SUITED TO THIS UNIT. BECAUSE OF THE LOW AVAILABLE WATER CAPACITY, MOST CROPS NEED FREQUENT, LIGHT APPLICATIONS OF WATER. LAND SMOOTHING OPERATIONS

THAT INCLUDE DEEP CUTS ARE FEASIBLE ON THIS UNIT.

$101USING A CROPPING SYSTEM THAT INCLUDES CLOSE-GROWING, HIGH-RESIDUE CROPS IN THE ROTATION AND MAINTAINING CROP RESIDUE ON THE SURFACE REDUCE EROSION. WINTER COVER CROPS ALSO PROTECT THE SOIL FROM EROSION. IF MAINTAINED ON THE SURFACE, RESIDUE FROM THESE CROPS REDUCES SOIL BLOWING IN SPRING. SOIL BLOWING IS ALSO REDUCED BY PRACTICING MINIMUM TILLAGE, WHICH REDUCES PULVERIZATION OF THE SOIL.

$101THE POTENTIAL PLANT COMMUNITY ON THIS UNIT IS MAINLY NEEDLEANDTHREAD, INDIAN RICEGRASS, SANDBERG BLUEGRASS, BLUEBUNCH WHEATGRASS AND BIG SAGEBRUSH. THE PRODUCTION OF FORAGE IS LIMITED BY THE LOW AVAILABLE WATER CAPACITY. IF THE RANGE IS OVERGRAZED, THE PROPORTION OF PREFERRED FORAGE PLANTS SUCH AS NEEDLEANDTHREAD DECREASES AND THE PROPORTION OF LESS PREFERRED FORAGE PLANTS SUCH AS RABBITBRUSH AND CHEATGRASS INCREASES. AREAS THAT ARE HEAVILY INFESTED WITH UNDESIRABLE SHRUBS CAN BE IMPROVED BY SUCH METHODS AS RAILING, CHAINING, BEATING, AND CHEMICAL TREATMENT. SEEDING ON THIS UNIT GENERALLY IS NOT PRACTICAL BECAUSE OF THE HAZARD OF SOIL BLOWING, THE LOW ANNUAL PRECIPITATION, AND THE LOW AVAILABLE WATER CAPACITY.

$101THIS UNIT IS WELL SUITED TO HOMESITE DEVELOPMENT. SOIL BLOWING CAN BE A PROBLEM ON CONSTRUCTION SITES. CUTBANKS ARE NOT STABLE AND ARE SUBJECT TO CAVING IN. MULCHING, FERTILIZATION, AND IRRIGATION ARE NEEDED TO ESTABLISH LAWN GRASSES AND OTHER SMALL PLANTS.

$101THE MAIN LIMITATION FOR SEPTIC TANK ABSORPTION FIELDS IS THE RISK OF SEEPAGE. IF THE DENSITY OF HOUSING IS MODERATE TO HIGH, COMMUNITY SEWAGE SYSTEMS ARE NEEDED TO PREVENT CONTAMINATION OF

NEARBY WATER SUPPLIES.

$101THIS MAP UNIT IS IN CAPABILITY SUBCLASSES IVE, IRRIGATED, AND VIIE, NONIRRIGATED.

WA0064

SOIL INTERPRETATIONS RECORD

MLRA(S): 7, 10, 11, 11A, 11B, 25
REV. CDL,GLR, 9-81
XERIC TORRIPSAMMENTS, MIXED, MESIC

QUINCY SERIES

THE QUINCY SERIES CONSISTS OF DEEP, EXCESSIVELY DRAINED SOILS FORMED IN EOLIAN SAND. THE PARENT MATERIALS ARE MAINLY GRANITIC, QUARTZITIC, AND BASALTIC SAND. THESE NEARLY LEVEL TO STEEP SOILS HAVE RIDGED, HUMMOCKY, DUNELIKE RELIEF. VEGETATION IS GRASS. MAAT IS 52F. MAP IS 6 TO 12 INCHES. FFS IS 100 TO 190 DAYS. TYPICALLY, THE PROFILE IS A GRAYISH-BROWN FINE SAND THAT EXTENDS TO 60 INCHES OR MORE. SLOPES RANGE FROM 0 TO 40 PERCENT.

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	LIQUID LIMIT	PLASTICITY INDEX
0-15	FS, S	SM, SP-SM	A-2, A-3	0	100	100	75-90	5-20	-	NP
0-15	LFS, LS	SM	A-2	0	100	100	85-100	15-30	-	NP
15-60	LFS, FS, S	SM	A-2	~~0~~	~~100~~	~~100~~	~~65-80~~	~~10-30~~	-	NP
				0-5	95-100	95-100	60-80	5-30		

DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY STEEL	CONCRETE
0-15	1-6	-	6.0-20	0.08-0.11	6.1-8.4	-	LOW	.17	5	1	.5-1	HIGH	LOW
0-15	1-6	-	6.0-20	0.11-0.15	6.1-8.4	-	LOW	.17	5	2	.5-1		
15-60	1-7	-	6.0-20	0.06-0.09	6.6-8.4	-	LOW	.17					

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		>60		-		A	LOW

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	0-15%: SEVERE-POOR FILTER 15+%: SEVERE-POOR FILTER,SLOPE	ROADFILL	0-15%: GOOD 15-25%: FAIR-SLOPE 25+%: POOR-SLOPE
SEWAGE LAGOON AREAS	0-7%: SEVERE-SEEPAGE 7+%: SEVERE-SEEPAGE,SLOPE	SAND	IMPROBABLE-EXCESS FINES
SANITARY	0-15%: SEVERE-TOO SANDY 15+%: SEVERE-SLOPE,TOO SANDY		IMPROBABLE-EXCESS FINES

ILL CH)	
SANITARY LANDFILL (AREA)	0-8%: SLIGHT 8-15%: MODERATE-SLOPE 15+%: SEVERE-SLOPE
DAILY COVER FOR LANDFILL	0-15%: POOR-TOO SANDY 15+%: POOR-TOO SANDY,SLOPE

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	0-15%: SEVERE-CUTBANKS CAVE 15+%: SEVERE-CUTBANKS CAVE,SLOPE
DWELLINGS WITHOUT BASEMENTS	0-8%: SLIGHT 8-15%: MODERATE-SLOPE 15+%: SEVERE-SLOPE
DWELLINGS WITH BASEMENTS	0-8%: SLIGHT 8-15%: MODERATE-SLOPE 15+%: SEVERE-SLOPE
SMALL COMMERCIAL BUILDINGS	0-4%: SLIGHT 4-8%: MODERATE-SLOPE 8+%: SEVERE-SLOPE
LOCAL ROADS AND STREETS	0-8%: SLIGHT 8-15%: MODERATE-SLOPE 15+%: SEVERE-SLOPE
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	0-8% FS,LFS,LS: MODERATE-DROUGHTY 8-15% FS,LFS,LS: MODERATE-DROUGHTY,SLOPE 0-8% S: MODERATE-DROUGHTY,TOO SANDY 8-15% S: MODERATE-DROUGHTY,SLOPE,TOO SANDY 15+%: SEVERE-SLOPE

REGIONAL INTERPRETATIONS

VEL	
TOPSOIL	0-8% LS,LFS: FAIR-TOO SANDY 8-15% LS,LFS: FAIR-TOO SANDY,SLOPE 15+% LS,LFS: POOR-SLOPE 0-15% FS,S: POOR-TOO SANDY 15+% FS,S: POOR-TOO SANDY,SLOPE

WATER MANAGEMENT

POND RESERVOIR AREA	0-8%: SEVERE-SEEPAGE 8+%: SEVERE-SEEPAGE,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-SEEPAGE,PIPING
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	DROUGHTY,FAST INTAKE,SOIL BLOWING
TERRACES AND DIVERSIONS	0-8%: TOO SANDY,SOIL BLOWING 8+%: SLOPE,TOO SANDY,SOIL BLOWING
GRASSED WATERWAYS	0-8%: DROUGHTY 8+%: SLOPE,DROUGHTY

RECREATIONAL DEVELOPMENT

CAMP AREAS	0-8% LS,LFS: SLIGHT 8-15% LS,LFS: MODERATE-SLOPE 15+% LS,LFS: SEVERE-SLOPE 0-15% FS,S: SEVERE-TOO SANDY 15+% FS,S: SEVERE-SLOPE,TOO SANDY	PLAYGROUNDS	0-2% LS,LFS: SLIGHT 2-6% LS,LFS: MODERATE-SLOPE 6+% LS,LFS: SEVERE-SLOPE 0-6% FS,S: SEVERE-TOO SANDY 6+% FS,S: SEVERE-SLOPE,TOO SANDY
PICNIC AREAS	0-8% LS,LFS: SLIGHT 8-15% LS,LFS: MODERATE-SLOPE 15+% LS,LFS: SEVERE-SLOPE 0-15% FS,S: SEVERE-TOO SANDY 15+% FS,S: SEVERE-SLOPE,TOO SANDY	PATHS AND TRAILS	0-15% LS,LFS: SLIGHT 15-25% LS,LFS: MODERATE-SLOPE 25+% LS,LFS: SEVERE-SLOPE 0-25% FS,S: SEVERE-TOO SANDY 25+% FS,S: SEVERE-TOO SANDY,SLOPE

CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

CLASS-DETERMINING PHASE	CAPABILITY		WHEAT, WINTER (BU)		ALFALFA HAY (TONS)		PASTURE (AUM)		POTATOES, IRISH (CWT)		ALFALFA SEED (LBS)		CORN (BU)		APPLES (BU)	
	NIRR	IRR,	NIRR	IRR,	NIRR	IRR,	NIRR	IRR,	NIRR	IRR,	NIRR	IRR,	NIRR	IRR,	NIRR	IRR,
0-15% LS,LFS	7E	4E		100		7.0		15		500				130		630
15+% LS,LFS	7E	6E														630
0-2% COOL	7E	4E		40		3.5		7		215		375				
2-12% COOL	7E	4E		25		2.0		5		170		350				
0-15% FS	7E	4E		80		5.0		13		360						
ERODED	7E	4E		70		5.0		13		360				120		

WOODLAND SUITABILITY

CLASS-DETERMINING PHASE	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY		TREES TO PLANT
		EROSION HAZARD	EQUIP, LIMIT	SEEDLING MORT'Y,	WINDTH, HAZARD	PLANT COMPET,	COMMON TREES	SITE INDX	
							NONE		

WINDBREAKS

CLAS.	TERMIN'G PHASE	SPECIES	HI	SPECIES	HI	SPECIES	HI	SPECIES	HI
IRR		LOMBARDY POPLAR	65	AUSTRIAN PINE	40	PEKING COTONEASTER	S	SIBERIAN PEASHRUB	15
		RUSSIAN-OLIVE	30	LILAC	20	GOLDEN WILLOW	35	HONEYSUCKLE	10
		GREEN ASH	50	BLUE SPRUCE	20	NORTHERN WHITE-CEDAR	25	ROCKY MT. JUNIPER	20

WILDLIFE HABITAT SUITABILITY

CLASS-DETERMINING PHASE	POTENTIAL FOR HABITAT ELEMENTS								POTENTIAL AS HABITAT FOR:			
	GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF
0-15% IRR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	V. POOR	V. POOR	FAIR	-	V. POOR	-
15+% IRR	POOR	FAIR	FAIR	FAIR	FAIR	FAIR	V. POOR	V. POOR	FAIR	-	V. POOR	-
NIRR	V. POOR	V. POOR	POOR	-	-	POOR	V. POOR	V. POOR	POOR	-	V. POOR	POOR

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT) BY CLASS DETERMINING PHASE: WARM	COOL
NEEDLEANDTHREAD	STCO4	45	15
SANDBERG BLUEGRASS	POSE	5	3
BIG SAGEBRUSH	ARTR2	5	10
THICKSPIKE WHEATGRASS	AGDA	1	2
OTHER PERENNIAL GRASSES	PPGG	5	
ANTELOPE BITTERBRUSH	PUTR2	5	
OTHER SHRUBS	SSSS	5	
THURBER NEEDLEGRASS	STTH2	-	5
GRAY RABBITBRUSH	CHNA2		5
GRAY HORSEBRUSH	TECA2		5
INDIAN RICEGRASS	ORHY	20	30
OTHER PERENNIAL FORBS	PPFF	5	10
POTENTIAL PRODUCTION (LBS./AC. DRY WT):			
FAVORABLE YEARS		700	750
NORMAL YEARS		500	500
UNFAVORABLE YEARS		250	250

FOOTNOTES

1 POSSIBLE HAZARD OF GROUNDWATER CONTAMINATION.